

Epitomes

Important Advances in Clinical Medicine

Ophthalmology

The Scientific Board of the California Medical Association presents the following inventory of items of progress in ophthalmology. Each item, in the judgment of a panel of knowledgeable physicians, has recently become reasonably firmly established, both as to scientific fact and important clinical significance. The items are presented in simple epitome and an authoritative reference, both to the item itself and to the subject as a whole, is generally given for those who may be unfamiliar with a particular item. The purpose is to assist busy practitioners, students, research workers or scholars to stay abreast of these items of progress in ophthalmology that have recently achieved a substantial degree of authoritative acceptance, whether in their own field of special interest or another.

The items of progress listed below were selected by the Advisory Panel to the Section on Ophthalmology of the California Medical Association and the summaries were prepared under its direction.

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Viral Corneal Disease

VIRAL INFECTIONS of the conjunctiva and cornea are commonplace and threaten sight. Herpes simplex keratitis remains the most common sight-threatening viral infection in the United States. Significant advances in antiviral therapy have occurred since the development of idoxuridine in 1964. The newest and most potent topical antiviral agent for herpes simplex keratitis is trifluridine (trifluorothymidine; Viroptic). Trifluridine is available in drop form and is useful not only for treating dendritic keratitis but is the drug of choice for the more serious form, geographic herpetic keratitis. Vidarabine (adenosine arabinoside; Vira-A) is available in ointment form and remains a useful antiviral agent for dendritic keratitis. The use of corticosteroids is contraindicated during active herpes simplex keratitis. For this reason, corticosteroid antibiotic combination drops should be avoided by physicians when treating "an infectious red eye."

Herpes zoster ophthalmicus remains a common sight-threatening infection, particularly in the elderly population. Topical antiviral agents have not been effective for treating this disorder. When the eye is involved, the mainstay of treatment is topical corticosteroids, cycloplegics and control of intraocular pressure. Recently studies using high-dose oral acyclovir (Zovirax) have shown a beneficial response in terms of the incidence and severity of both keratitis and uveitis. It appears that the use of this agent early in the course of herpes zoster ophthalmicus (less than seven days from onset of skin eruption) can be of significant ocular benefit. Unfortunately, the drug does not appear to have a beneficial effect on postherpetic neuralgia in immunocompetent patients.

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Ocular Manifestations of the Acquired Immunodeficiency Syndrome

OCULAR DISORDERS are a common manifestation of the acquired immunodeficiency syndrome (AIDS). Disorders fall into four categories: lesions related to retinal vascular disease, ocular neoplasms, neuro-ophthalmic abnormalities and ocular opportunistic infections. The most common ocular lesions are "cotton wool spots" that correspond to areas of retinal ischemia. A retinal vasculopathy of unknown cause leads to focal retinal ischemia in most AIDS patients. Cotton wool spots are asymptomatic, do not require treatment and have no known diagnostic or prognostic significance. Ocular neoplasms include conjunctival Kaposi's sarcoma and orbital Burkitt's lymphoma. Neuro-ophthalmic abnormalities, including papilledema, cranial nerve palsies and visual field defects, may be the first signs of intracranial infections or neoplasms.

Many opportunistic pathogens have been reported to cause ocular infections in AIDS patients. Cytomegalovirus (CMV) retinopathy, however, which develops in a third of patients, is the only common ocular opportunistic infection. CMV infection causes full-thickness retinal necrosis and permanent loss of vision. Lesions are characterized by large yellow-white granular patches with indistinct borders, usually associated with hemorrhage. CMV retinopathy may be bilateral and multifocal. It is relentlessly progressive, eventually causing destruction of the entire retina.

Currently available antiviral drugs (vidarabine, acyclovir) and immunotherapeutic drugs (α - and γ -interferon, interleukin 2) have been ineffective in treating CMV retinopathy in AIDS patients. Recently, however, a new drug, 9-[2-hydroxy-1-(hydroxymethyl)ethoxymethyl]guanine (BW